

# Work Order ID 58440

May 6, 2010 3:01:17 PM

SHIP MAY 14

Page 1

Item ID: D3393-1

Revision ID:

Item Name: Battery Lock Casing

Start Date: 06/05/2010 Start Qty: 10.00

Required Date: 11/05/2010 Req'd Qty: 10.00

Reference:

Accept

Cust Item ID:

Customer:

Setup Start

Stop

Run Start

Stop

Approvals:

Process Plan:

Date: 10-5-06

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3393

Rev A

100



Bandsaw

BAND SAW

0.00

Jeaspa Bandsaw

Memo

Cut blank: 1.500" x 1.500" x 3.125" long

0.00

MW= 10/05/14

10

Ø

110



HAAS 1

HAAS CNC VERTICAL MACHINING #1

0.00

HAAS CNC vertical machine #1

Memo

Machine D3393-1 as per Folio FA510 and Dwg D3393 Identify as D3393-1

□

Deburr

0.00

MW= 10/05/14

10

Ø

120



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

0.00

MW= 10/05/14

10

Ø

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Work Order ID 58440

May 6, 2010 3:01:17 PM



Page 2

Item ID: D3393-1

Revision ID:

Accept



Setup Start



Item Name: Battery Lock Casing

Stop



Start Date: 06/05/2010 Start Qty: 10.00

Required Date: 11/05/2010 Req'd Qty: 10.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130



QC

Quality Control

QC8- Inspect parts - second check

0.00

L.A 10/05/14

10

Ø

Memo

0.00

140



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

M 10/05/17

10

Ø

Memo

0.00

150



Powdercoat

Powder Coating

Fire Red(Ref:4.3.5.10) per QSI005 4.3

1102391

0.00

0.00

=) M 10/05/17

10

Ø

Memo

START TIME:

7:30AM

OVEN TEMPERATURE:

8:00AM FINISH TIME:

320°C

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 58440

May 6, 2010 3:01:17 PM



Page 3

Item ID: D3393-1

Revision ID:

Item Name: Battery Lock Casing

Start Date: 06/05/2010 Start Qty: 10.00

Required Date: 11/05/2010 Req'd Qty: 10.00

Reference:

Accept



Setup Start

Stop



Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

10 BR 10-5-17.

170

Identify as per dwg & Stock Location: 487

0.00



Packaging

Memo

0.00

Packaging

10-5-24

10-5-24

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/05/17

u wv 5.17

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

May 6, 2010 3:01:22 PM

Page 1

Work Order ID: 58440

Parent Item: D3393-1

Parent Item Name: Battery Lock Casing

Comments: IPP A ☐ 05.02.18 ☐ New issue ☐ KJ/JLM ☐

Start Date: 06/05/2010

Required Date: 11/05/2010

Start Qty: 10.00

Required Qty: 10.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Qty Issued	Date Issued	Status
M6061T6B1.500X01.50 0		Purchased	No			100	f	24.0000	0.2708			

6061-T6 Bar 1.50 x 1.50

## Location

## Loc Qty

## Loc Code

MAT10

24

107244

1

107432

20

108962

3

MJF  
6/05/14

5.3385

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:			WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	58440
<b>Description:</b> Battery Lock Casing		<b>Part Number:</b>	D3393-1
<b>Inspection Dwg:</b> D3393	<b>Rev:</b> A	Page 1 of 1	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.750	+0.010/-0.000	Ø 0.750	✓			
0.625	+0.010/-0.000	0.628	✓			
Ø1.250	+/-0.010	1.248	✓			
1.088	+/-0.010	1.086	✓			
Ø0.734	+/-0.010	Ø 0.737	✓			
2.658	+/-0.010	2.654	✓			
1.550	+/-0.010	1.549	✓			
0.125 x 45°	+/-0.010 x 0.5°	0.125 x 45°	✓			
1.50	+/-0.030	1.490	✓			
0.750	+/-0.010	0.749	✓			
Ø1.050	+/-0.010	Ø 1.058	✓			
Ø1.000	+/-0.010	Ø 0.999	✓			
0.338	+/-0.010	0.341	✓			
0.563	+/-0.010	0.563	✓			
0.100	+0.000/-0.010	0.100	✓			
3.00	+/-0.030	3.002	✓			
1.500	+/-0.010	1.497	✓			
0.375	+/-0.010	0.375	✓			
1.25	+/-0.030	1.249	✓			
0.125	+/-0.010	0.125	✓			
30°	0.5°	30°	✓			

<b>Measured by:</b> MME	<b>Audited by:</b> J.A	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 10/05/14	<b>Date:</b> 10/05/14	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue	KJ/JLM	
B	08.11.28	Tolerances revised	KJ/EC	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

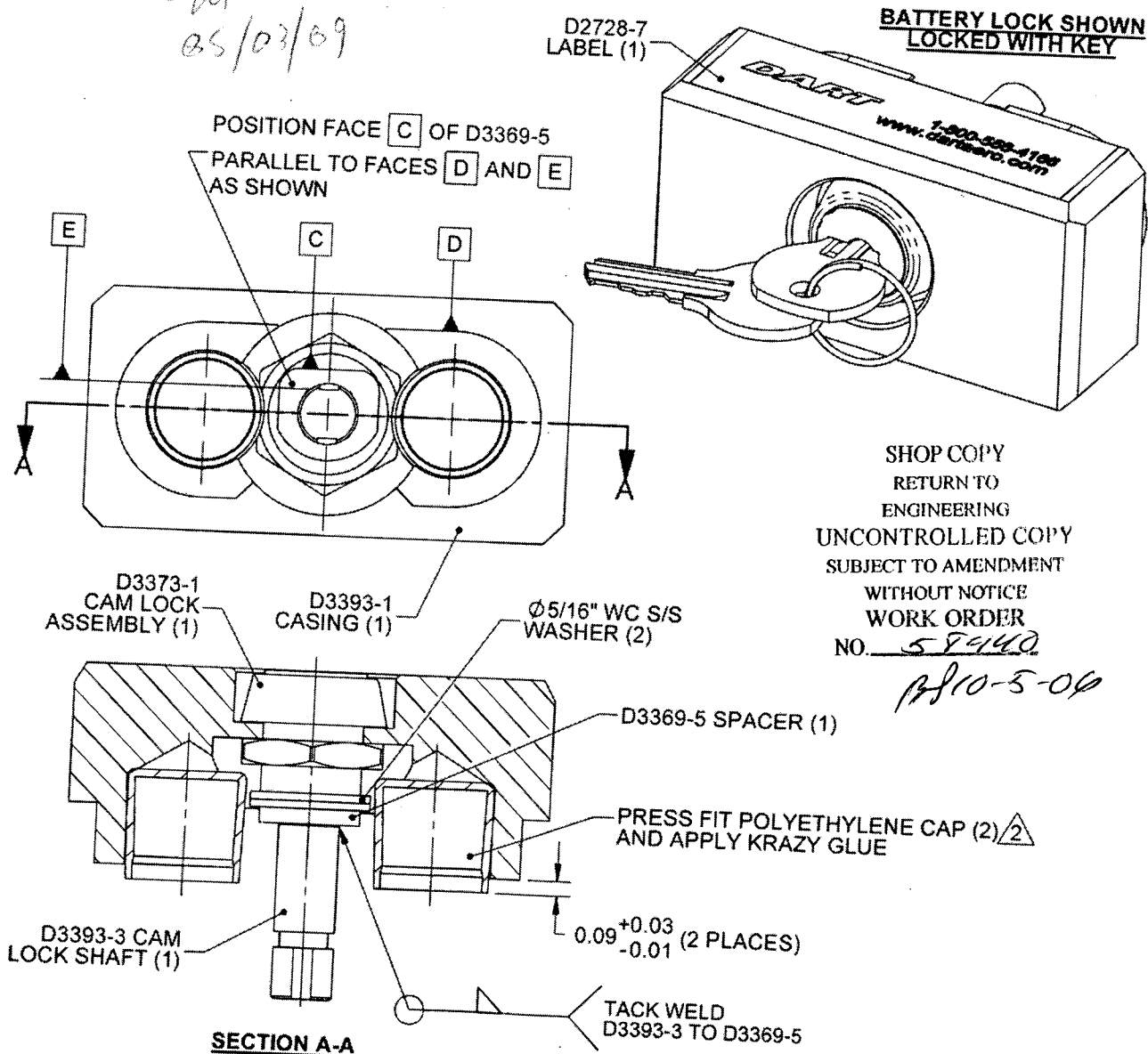
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN 13	DRAWN BY 13	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED R	APPROVED R	DRAWING NO. D3393	REV. A
DATE 05.02.08		TITLE BATTERY LOCK	SHEET 1 OF 3 SCALE 1:1
A	05.02.08	NEW ISSUE	

RELEASED  
05/03/09



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 58940

10-5-00

### D3393-041 BATTERY LOCK ASSEMBLY

#### NOTES:

- 1) WELD PER DART QSI 004
- 2) POSSIBLE SUPPLIER: McMASTER-CARR, P/N 9567K21

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

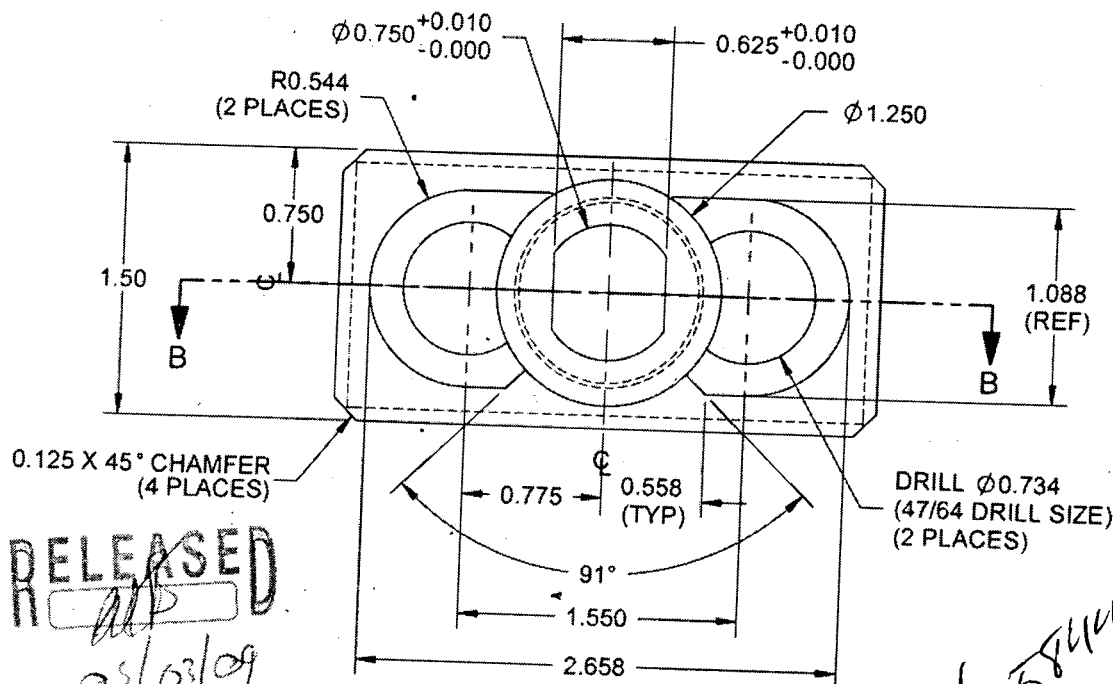
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

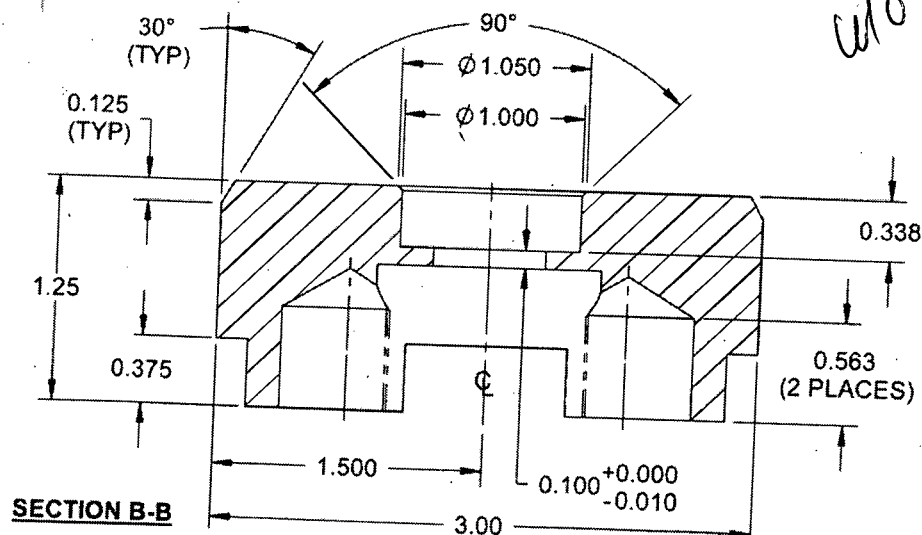


DESIGN 13	DRAWN BY 13	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED 13	APPROVED 13	DRAWING NO. <b>D3393</b>	REV. A
DATE <b>05.02.09</b>	TITLE <b>BATTERY LOCK</b>	SHEET 2 OF 3	
		SCALE 1:1	



RELEASED  
05/03/09

W/0 58440



SECTION B-B

### D3393-1 CASING

#### NOTES:

- 1) MATERIAL: 6061-T6/T651 (QQ-A-200/8 OR QQ-A-225/8)  
(REF. DART SPEC. M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT FIRE RED (4.3.5.10) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

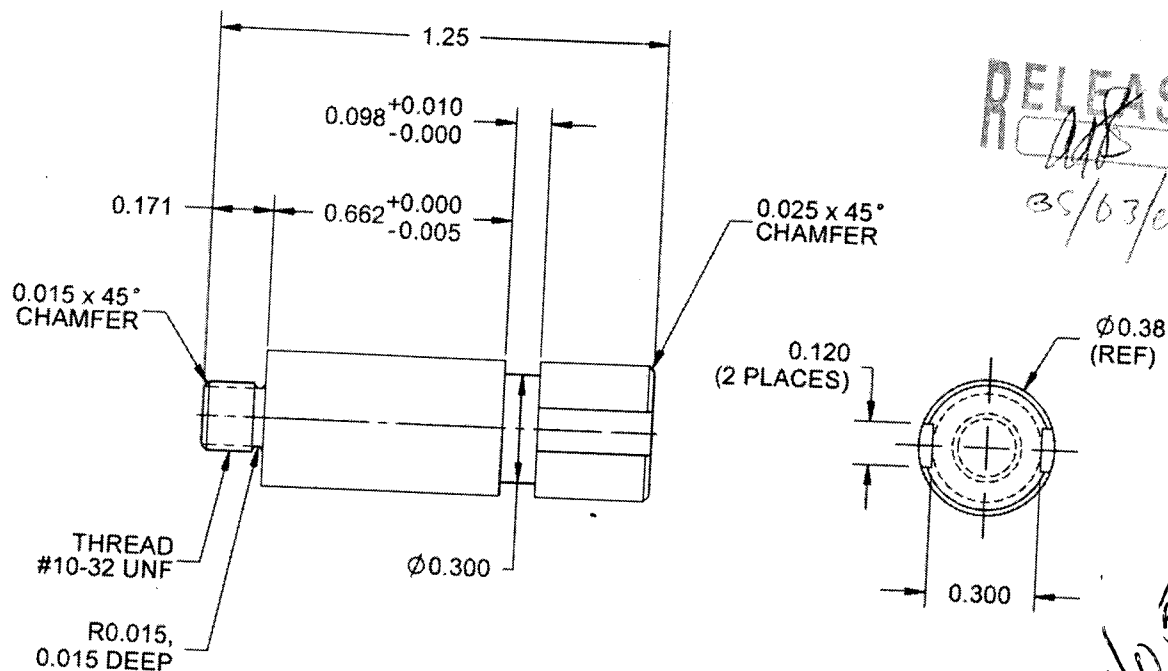
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN 13	DRAWN BY 13	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED KF	APPROVED [Signature]	DRAWING NO. <b>D3393</b>	REV. A
DATE <b>05.02.09</b>		TITLE <b>BATTERY LOCK</b>	SHEET 3 OF 3
			SCALE 2:1



### D3393-3 CAM LOCK SHAFT

#### NOTES:

- 1) MATERIAL: AISI 303 S.S. (REF. DART SPEC. M303R0.375)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010

**COPYRIGHT © 2005 BY DART AEROSPACE LTD.**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries